

National Details for Corrective Action Event Codes

CA010 - RFA Initiation

Table: Corrective Action Event

<u>Event Code Name:</u>	CA010 - RFA INITIATION
<u>Description:</u>	The event by which the State or EPA starts to conduct an RFA. The result must include a determination as to whether or not to proceed with an RFI at the facility.
<u>Initiating Sources:</u>	
<u>Nationally Required:</u>	No
<u>Schedule Date:</u>	Date upon which a full or partial RFA is scheduled to be initiated by an agency.
<u>Actual Date:</u>	Date upon which a full or partial RFA is initiated by an agency as indicated on the first page of standardized reporting forms within the RFA document.
<u>Responsible Agency:</u>	EPA or State

CA050 - RFA Completed

Table: Corrective Action Event

<u>Event Code Name:</u>	CA050 - RFA COMPLETED
<u>Description:</u>	The event by which the RFA is completed.
	Status Codes:
	RF Assessment was an RFA.
	PA Assessment was a PA-Plus.
<u>Initiating Sources:</u>	Document with results of the RFA that determine if there is a release or potential for release for the entire facility.
<u>Nationally Required:</u>	Yes
<u>Schedule Date:</u>	Date is scheduled to approve the result of the RFA.

Actual Date:

The date upon which there is enough information to determine if there is a release or potential for release for the entire facility is so documented. If no CA processing is necessary, Event Code 070, with a Status Code NO, which indicates that CA process is terminated, should be entered after Event Code CA050-RFA Completed.

Responsible Agency:

EPA or State

CA060 - Notice of Contamination

Table: Corrective Action Event

Event Code Name:

CA060 - NOTICE OF CONTAMINATION

Description:

Note: A condition of any permit or order should provide for this notice of contamination or release of hazardous constituents.

Receipt by the Agency of written notification that contamination has been discovered at the RCRA facility and that the RCRA facility has notified all persons potentially impacted by the release of hazardous constituents. This event is a "floater".

Initiating Sources:

Facility Submission

Nationally Required:

Yes

Schedule Date:

N/A

Actual Date:Responsible Agency:

EPA or State

CA070 - RFA Determination Of Need For An RFI

Table: Corrective Action Event

Event Code Name:

CA070 - DETERMINATION OF NEED FOR AN RFI

Description:

This event indicates whether an RFI or further investigation is necessary to analyze the extent of contamination at this facility. An RFI is usually necessary when, after the initial assessment, there is evidence of or the likelihood of contamination release which poses a current or potential threat to human health and/or the environment. The event can be completed after the initial assessment (i.e. RFA or PA-Plus). A status code should be entered at the same time as the date of the event.

Status Codes:

- YE** RFI is Necessary; should be entered when further investigation is needed.
- NO** RFI is Not Necessary; should be entered when further investigation is not needed. "NO" may indicate that an RFI will not be needed at this site because remediation is not necessary.

Initiating Sources:

Regional or State determination upon review of an initial facility assessment.

Nationally Required:

Yes

Schedule Date:

None

Actual Date:

Date of determination

Responsible Agency:

EPA or State

CA075 - CA Prioritization

Table: Corrective Action Event

Event Code Name:

CA075 - CA PRIORITIZATION

Description:

This event indicates that a facility or area has been prioritized using the National Corrective Action Prioritization System (NCAPS) or an equivalent system which has been approved by EPA Headquarters. A status code for the priority of the facility or area should be entered at the same time as the prioritization complete date. High, Medium, and Low determinations should be based on current national guidance.

Status Codes:

- HI** Facility or area was assigned a high corrective action priority.
- ME** Facility or area was assigned a medium corrective action priority.
- LO** Facility or area was assigned a low corrective action priority.

Initiating Sources:

The prioritization system results

Nationally Required:

Yes

Schedule Date:

Date prioritization is planned to be completed.

Actual Date:

Date the facility has been given a priority through the use of NCAPS.

Responsible Agency:

EPA Regions are responsible for completing facility prioritization and for entry of that data unless another agreement has been reached between a Region and its States.

Guidance:

EPA originally intended the NCAPS ranking to be a facility level ranking, but some Regions and States have found it useful to rank areas as well. Ranking for areas within a facility is not required. The corrective action program will count a facility as High NCAPS priority if one or more areas at the facility have a High NCAPS ranking as the most current ranking.

CA075, which tracks facility priority derived through the National Corrective Action Prioritization System (NCAPS), was originally intended to track one ranking of High, Medium or Low NCAPS priority for the entire facility. As facilities are re-ranked because of more current information, or because of some action which changes the priority, the RCRIS system has the capability to reflect successive NCAPS rankings, while not allowing the original NCAPS rank to be overwritten. [Note: NCAPS re-ranking of facilities/areas is not required.] This can be done by entering an additional NCAPS ranking with the new ranking date. Do not overwrite or erase the original ranking or subsequent ranking entries. This will enable us to have an historical record of facility priority, and to complete trend analyses. The most recent NCAPS ranking, by date, will be used for facility level data pulls.

CA100 - RFI Imposition

Table: Corrective Action Event

<u>Event Code Name:</u>	CA100 - RFI IMPOSITION
<u>Description:</u>	The event by which the State or EPA imposes an obligation (via an Enforcement order, permit or permit modification, voluntary instrument, or state analogous program) upon the owner/operator of a facility regulated by RCRA or the equivalent state law to conduct an RFI at a facility.
	Status Codes:
	DC Focused data collection required for stabilization evaluation.
<u>Initiating Sources:</u>	Enforcement order, permit or permit modification, voluntary instrument, or state analogous program.
<u>Nationally Required:</u>	Yes
<u>Schedule Date:</u>	Date the Director is expected to sign the Enforcement order, permit or permit modification, voluntary instrument, or state analogous document.
<u>Actual Date:</u>	Date the Director signs the enforcement order, permit or permit modification, voluntary instrument, or state analogous document.
<u>Responsible Agency:</u>	EPA or State

CA110 - RFI Workplan Received

Table: Corrective Action Event

<u>Event Code Name:</u>	CA110 - RFI WORKPLAN RECEIVED
<u>Description:</u>	The event by which a RCRA facility submits an RFI workplan to the State or EPA.
<u>Initiating Sources:</u>	Facility submission
<u>Nationally Required:</u>	Yes
<u>Schedule Date:</u>	Due date is date in permit or order condition.
<u>Actual Date:</u>	Date RFI workplan is date-stamped "received" by the State or U.S. EPA.
<u>Responsible Agency:</u>	EPA or State

CA120 - RFI Workplan Modification Requested By Agency

Table: Corrective Action Event

<u>Event Code Name:</u>	CA120 - RFI WORKPLAN MODIFICATION REQUESTED BY AGENCY
<u>Description:</u>	The event by which the State or EPA requests that the RCRA facility modify its RFI workplan.
<u>Initiating Sources:</u>	Letter from the State or U.S. EPA to the facility.
<u>Nationally Required:</u>	No
<u>Schedule Date:</u>	None
<u>Actual Date:</u>	Date of letter

CA140 - RFI Workplan Notice Of Deficiency Issued

Table: Corrective Action Event

<u>Event Code Name:</u>	CA140 - RFI - WORKPLAN NOTICE OF DEFICIENCY ISSUED
<u>Description:</u>	The event by which the State or EPA issues a Notice of Deficiency to the Handler citing deficiencies in the proposed RFI Workplan.
<u>Initiating Sources:</u>	Notice of Deficiency from the EPA or State to the facility.
<u>Nationally Required:</u>	No

Schedule Date: Date N.O.D. is scheduled to be sent to handler.
Actual Date: Date of N.O.D.
Responsible Agency: EPA or State

CA150 - RFI Workplan Approved

Table: Corrective Action Event

Event Code Name: CA150 - RFI WORKPLAN APPROVED
Description: The event by which the State or EPA approves the RFI workplan submitted by the RCRA facility.
Initiating Sources: Letter from State or EPA approving the RFI plan prepared by a facility in response to an order, permit, or permit modification with a schedule of compliance imposing an RFI obligation upon the facility.
Nationally Required: Yes
Schedule Date: Date the Director is expected to sign the letter.
Actual Date: Date the Director signs the letter.
Responsible Agency: EPA or State

CA155 - RFI Supplemental Information Requested By Agency

Table: Corrective Action Event

Event Code Name: CA155 - RFI SUPPLEMENTAL INFORMATION REQUESTED BY AGENCY
Description: The event by which the State or EPA requests information from the RCRA facility to modify, expand, amend, reexamine, or otherwise revisit the Workplan which had previously been approved but the report generated is not yet sufficient.
Initiating Sources:
Nationally Required: No
Schedule Date:
Actual Date:
Responsible Agency: EPA or State

CA160 - RFI Supplemental Information Received

Table: Corrective Action Event

<u>Event Code Name:</u>	CA160 - RFI SUPPLEMENTAL INFORMATION RECEIVED
<u>Description:</u>	The event by which the RCRA facility submits supplemental RFI information.
<u>Initiating Sources:</u>	Facility submission
<u>Nationally Required:</u>	No
<u>Schedule Date:</u>	Due date is date in permit or order condition, permit or order modification, or letter from State or U.S. EPA requesting supplemental information.
<u>Actual Date:</u>	Date RFI supplemental information is date-stamped "received" by the State or U.S. EPA.
<u>Responsible Agency:</u>	EPA or State

CA170 - RFI Supplemental Information Deemed Satisfactory

Table: Corrective Action Event

<u>Event Code Name:</u>	CA170 - RFI SUPPLEMENTAL INFORMATION DEEMED SATISFACTORY
<u>Description:</u>	The event by which the State or EPA formally approves the RFI supplemental information.
<u>Initiating Sources:</u>	Letter from State or U.S. EPA approving the RFI supplemental information prepared by the facility.
<u>Nationally Required:</u>	No
<u>Schedule Date:</u>	Date the Director is expected to sign the letter.
<u>Actual Date:</u>	Date the Director signs the letter.
<u>Responsible Agency:</u>	EPA or State

CA180 - RFI Supplemental Implementation Begun

Table: Corrective Action Event

<u>Event Code Name:</u>	CA180 - RFI IMPLEMENTATION BEGUN
<u>Description:</u>	The event by which the RCRA facility committed to begin any implementation in its Agency approved RFI Workplan.
<u>Initiating Sources:</u>	Notification to State or U.S. EPA by facility, or on-site observation by State or U.S. EPA
<u>Nationally Required:</u>	No
<u>Schedule Date:</u>	Date in order or permit condition, or date facility is expected to begin implementation.
<u>Actual Date:</u>	Date of notification or observation.
<u>Responsible Agency:</u>	EPA or State

CA190 - RFI Report Received

Table: Corrective Action Event

<u>Event Code Name:</u>	CA190 - RFI REPORT RECEIVED
<u>Description:</u>	The event by which a RCRA facility submits a written summary of the results of the approved RFI Workplan.
<u>Initiating Sources:</u>	Report
<u>Nationally Required:</u>	No
<u>Schedule Date:</u>	Date in permit or order condition, or date facility is expected to submit report.
<u>Actual Date:</u>	Date report is received by State or U.S. EPA.
<u>Responsible Agency:</u>	EPA or State

CA195 - FI Progress Reports Received

Table: Corrective Action Event

Event Code Name:	CA195 - FI PROGRESS REPORTS RECEIVED
Description:	Receipt of reports submitted by the RCRA facility to the State or EPA during execution of the approved RFI workplan. This event is a "floater".
Initiating Sources:	Reports
Nationally Required:	No
Schedule Date:	Dates in permit or order conditions.
Actual Date:	Dates reports are received by State or U.S. EPA.
Responsible Agency:	EPA or State

CA200 - RFI Approved

Table: Corrective Action Event

Event Code Name:	CA200 - RFI APPROVED
Description:	The event by which the State or EPA accepts the findings and recommendations of the RFI report submitted by the RCRA facility. No entry should be made under this code until the RFI enables a formal agency decision to continue with CMS or terminate the corrective action process.
Initiating Sources:	Letter from the State or EPA notifying the facility of the result of the RFI.
Nationally Required:	Yes
Schedule Date:	Date the Director is expected to sign the letter.
Actual Date:	Date the Director signs the letter.
Responsible Agency:	EPA or State

CA210 - CA Responsibility Referred To A Non-RCRA Federal Authority

Table: Corrective Action Event

<u>Event Code Name:</u>	CA210 - CA RESPONSIBILITY REFERRED TO A NON-RCRA FEDERAL AUTHORITY
<u>Description:</u>	The facility or area has been referred to CERCLA or some other Federal Non-RCRA authority. This does not imply that the RCRA program would lack the authority to go back to a RCRA facility that had been addressed under CERCLA or other non-RCRA Federal authority. It means that, as a matter of program policy, once a facility is referred CERCLA or other non-RCRA Federal authority, we would not actively monitor the progress of the facility and would not expect the facility to "return" to RCRA, barring some unforeseen event.
	Status Codes:
	SF Corrective Action at the facility or area referred to CERCLA.
	OT Corrective Action referred to another non-RCRA Federal Authority.
<u>Initiating Sources:</u>	Agency determination
<u>Nationally Required:</u>	Yes
<u>Schedule Date:</u>	None
<u>Actual Date:</u>	Date the Agency determines that corrective action at the facility or area has been referred to CERCLA or some other Federal Non-RCRA authority.
<u>Responsible Agency:</u>	EPA
<u>Guidance:</u>	

The national RCRA CA program does not expect to continue keeping track of the remedial events that have been completed once a facility has been referred to Superfund. That is not to say that the RCRA program would lack the authority to go back to a RCRA facility that had been addressed under CERCLA and request additional work. However, as a matter of program policy, once a facility is referred to CERCLA, we would not actively monitor the progress of the facility and would not expect the facility to "return" to RCRA, barring some unforeseen event.

This event should not be used for facilities that are only receiving an initial assessment (PA plus) from the Superfund program, but are expected to return to the RCRA program for the facility investigation and facility remediation steps. However, if a RCRA facility, such as one that has converted to less than 90-day storage, has, as a matter of national policy, been deferred to the Superfund program and if, in the case specific circumstance, the Region or authorized state has clearly transferred this facility to the Superfund queue, then the "Referred to a Non-RCRA Federal Authority" event could be entered for these facilities.

Note: Regions and States are responsible for cleaning up old CA210 data. All reports for CA210 must use the status codes to insure that the correct information is pulled for the current definition of CA210. In cases where there is old no further action data, refer to the new CA999 status code, NF.

CA225 - Stabilization Measures Evaluation

Table: Corrective Action Event

Event Code Name:

CA225 - STABILIZATION MEASURES EVALUATION

Description:

This event indicates that the feasibility and appropriateness of stabilization activities at this facility have been evaluated. This evaluation should be completed using the National Corrective Action Stabilization Questionnaire or a similar type of evaluation which asks the same range of questions. A status code should be entered for the areas covered by each evaluation. The status codes are consistent with the possible outcomes from the National Corrective Action Stabilization Questionnaire.

Status Codes:

- | | |
|-----------|---|
| YE | This facility is amenable to stabilization activity based on the status of corrective action work at the facility, technical factors, the degree of risk, timing considerations and administrative considerations. |
| NF | This facility is not amenable to stabilization activity at the present time, because it appears to be technically infeasible or inappropriate. |
| IN | This facility is not amenable to stabilization activity because of a lack of technical data. An evaluation has been completed, but further data is necessary to determine stabilization measures, feasibility or appropriateness. This status should be changed when data becomes available. |
| NR | This facility is not amenable to stabilization activity at the present time for reasons other than 1) it appears to be technically infeasible or inappropriate (NF) or 2) there is a lack of technical information (IN). Reasons for this conclusion may be the status of closure at the facility, the degree of risk, timing considerations, the status of corrective action work at the facility, or other administrative considerations. |

Initiating Sources:

The completed National Corrective Action Stabilization Questionnaire or similar review.

Nationally Required:

Yes

Schedule Date: Date facility is expected to be evaluated for stabilization measure.

Actual Date: The date the completed National Corrective Action Stabilization Questionnaire or documentation of a similar review is entered into the facility file.

Responsible Agency: EPA or State authorized for corrective action

Guidance:

Stabilizations can be entered for the entire facility, or for certain areas at the facility.

CA250 - CMS Imposition

Table: Corrective Action Event

Event Code Name: CA250 - CMS IMPOSITION

Description: The event by which the State or EPA formally imposes the obligation upon a RCRA facility to perform a Corrective Measures Study (CMS).

Initiating Sources: Compliance Schedule or permit schedule of compliance.

Nationally Required: No

Schedule Date: Date the Director is expected to sign the order, permit, or permit modification imposing the CMS requirement.

Actual Date: Date the Director signs the enforcement order, permit, or permit modification imposing the CMS requirement.

Responsible Agency: EPA or State

CA260 - CMS Workplan Received

Table: Corrective Action Event

<u>Event Code Name:</u>	CA260 - CMS WORKPLAN RECEIVED
<u>Description:</u>	The event by which a RCRA facility submits a CMS workplan to the State or EPA.
<u>Initiating Sources:</u>	Facility submission
<u>Nationally Required:</u>	No
<u>Schedule Date:</u>	Due date is in permit or order condition.
<u>Actual Date:</u>	Date CMS workplan is date-stamped "received" by the State or U.S. EPA.
<u>Responsible Agency:</u>	EPA or State

CA270 - CMS Workplan Modification Requested By Agency

Table: Corrective Action Event

<u>Event Code Name:</u>	CA270 - CMS WORKPLAN MODIFICATION REQUESTED BY AGENCY
<u>Description:</u>	The event by which the State or EPA formally requests that the RCRA facility modify its CMS workplan.
<u>Initiating Sources:</u>	Letter from the State or U.S. EPA
<u>Nationally Required:</u>	No
<u>Schedule Date:</u>	None
<u>Actual Date:</u>	Date of letter
<u>Responsible Agency:</u>	EPA or State

CA300 - CMS Workplan Approved

Table: Corrective Action Event

<u>Event Code Name:</u>	CA300 - CMS WORKPLAN APPROVED
<u>Description:</u>	The event by which the State or EPA formally approves the CMS plan submitted by the RCRA facility. No entry should be made under this code until the Agency intends for the RCRA facility to begin conducting the CMS.
<u>Initiating Sources:</u>	Letter from State or EPA approving the CMS plan prepared by a facility in response to an order, permit, or permit modification with a schedule of compliance imposing a CMS obligation upon the facility.
<u>Nationally Required:</u>	Yes
<u>Schedule Date:</u>	Date the Director is expected to sign the letter.
<u>Actual Date:</u>	Date the Director signs the letter.
<u>Responsible Agency:</u>	EPA or State

CA305 - CMS Supplemental Information Requested By Agency

Table: Corrective Action Event

<u>Event Code Name:</u>	CA305 - CMS SUPPLEMENTAL INFORMATION REQUESTED BY AGENCY
<u>Description:</u>	The event by which the State or EPA requests the RCRA facility to modify, amend, revisit, reexamine, or re-conduct its approved CMS.
<u>Initiating Sources:</u>	
<u>Nationally Required:</u>	No
<u>Schedule Date:</u>	
<u>Actual Date:</u>	
<u>Responsible Agency:</u>	EPA or State

CA310 - CMS Supplemental Information Received

Table: Corrective Action Event

<u>Event Code Name:</u>	CA310 - CMS SUPPLEMENTAL INFORMATION RECEIVED
<u>Description:</u>	The event by which the RCRA facility submits an amendment, modification, clarification, or other supplemental information regarding the CMS.
<u>Initiating Sources:</u>	Facility submission
<u>Nationally Required:</u>	No
<u>Schedule Date:</u>	Due date is date in permit or order condition, permit or order modification, or letter from State or U.S. EPA requesting supplement.
<u>Actual Date:</u>	Date CMS supplemental workplan is date stamped "received" by the State or U.S. EPA.
<u>Responsible Agency:</u>	EPA or State

CA320 - CMS Supplemental Information Deemed Satisfactory

Table: Corrective Action Event

<u>Event Code Name:</u>	CA320 - CMS SUPPLEMENTAL INFORMATION DEEMED SATISFACTORY
<u>Description:</u>	The event by which the State or EPA formally approves the CMS supplemental information.
<u>Initiating Sources:</u>	Letter from State or U.S. EPA approving the CMS supplemental information prepared by a facility.
<u>Nationally Required:</u>	No
<u>Schedule Date:</u>	Date the Director is expected to sign the letter.
<u>Actual Date:</u>	Date the Director signs the letter.
<u>Responsible Agency:</u>	EPA or State

CA330 - CMS Implementation Begun

Table: Corrective Action Event

<u>Event Code Name:</u>	CA330 - CMS IMPLEMENTATION BEGUN
<u>Description:</u>	The event by which a RCRA facility committed to any implementation in its agency approved CMS Workplan.
<u>Initiating Sources:</u>	Notification to State or U.S. EPA by facility or on-site observation by State or U.S. EPA.
<u>Nationally Required:</u>	No
<u>Schedule Date:</u>	Date in permit or order condition, or date facility is expected to begin implementation.
<u>Actual Date:</u>	Date report is received by State or U.S. EPA.
<u>Responsible Agency:</u>	EPA or State

CA340 - CMS Report Received

Table: Corrective Action Event

<u>Event Code Name:</u>	CA340 - CMS REPORT RECEIVED
<u>Description:</u>	The event by which a RCRA facility submits a written summary of the results of the approved CMS workplan.
<u>Initiating Sources:</u>	Report
<u>Nationally Required:</u>	No
<u>Schedule Date:</u>	Date in permit or order condition, or date facility is expected to submit report.
<u>Actual Date:</u>	Date report is received by State or U.S. EPA.
<u>Responsible Agency:</u>	EPA or State

CA345 - CMS Progress Reports Received

Table: Corrective Action Event

<u>Event Code Name:</u>	CA345 - CMS PROGRESS REPORTS RECEIVED
<u>Description:</u>	Receipt of reports submitted by the RCRA facility to State or EPA during execution of the approved CMS workplan. This event is a "floater".
<u>Initiating Sources:</u>	Reports
<u>Nationally Required:</u>	No
<u>Schedule Date:</u>	Dates in permit or order conditions.
<u>Actual Date:</u>	Dates reports are received by State or U.S. EPA.
<u>Responsible Agency:</u>	EPA or State

CA350 - CMS Approved

Table: Corrective Action Event

<u>Event Code Name:</u>	CA350 - CMS APPROVED
<u>Description:</u>	The event by which the State or EPA approves the final CMS report submitted by the RCRA facility. No entry should be made under this code until sufficient data, information, has been provided to the Agency so that a decision to continue or terminate the corrective action process can be made.
<u>Initiating Sources:</u>	Letter from State or EPA approving the final CMS plan prepared by a facility in response to an order, permit, or permit modification with a schedule of compliance imposing a CMS obligation upon the facility.
<u>Nationally Required:</u>	Yes
<u>Schedule Date:</u>	Date the Director is expected to sign the letter.
<u>Actual Date:</u>	Date the Director signs the letter.
<u>Responsible Agency:</u>	EPA or State

CA370 - Petition For No Further Action Receipt Date

Table: Corrective Action Event

<u>Event Code Name:</u>	CA370 - PETITION FOR NO FURTHER ACTION RECEIPT DATE
<u>Description:</u>	Receipt by the Agency of a permit modification requested by the RCRA facility to eliminate any remaining corrective action steps which are included as conditions in the RCRA facility's permit. This event is a "floater".
<u>Initiating Sources:</u>	
<u>Nationally Required:</u>	No
<u>Schedule Date:</u>	
<u>Actual Date:</u>	
<u>Responsible Agency:</u>	EPA or State

CA375 - Decision On Petition For No Further Action

Table: Corrective Action Event

<u>Event Code Name:</u>	CA375 - DECISION ON PETITION FOR NO FURTHER ACTION
<u>Description:</u>	The event by which the State or EPA formally approves the petition by the RCRA facility for no further action.
<u>Initiating Sources:</u>	
<u>Nationally Required:</u>	No
<u>Schedule Date:</u>	
<u>Actual Date:</u>	
<u>Responsible Agency:</u>	EPA or State

CA380 - Date For Public Notice On Proposed Remedy

Table: Corrective Action Event

<u>Event Code Name:</u>	CA380 - DATE FOR PUBLIC NOTICE ON PROPOSED REMEDY
<u>Description:</u>	The event by which the State or EPA sends public notice that a proposed remedy has been tentatively selected for a RCRA facility. The public notice should specify where the documents upon which the Agency made its decision are located and when they are available for public review.
<u>Initiating Sources:</u>	
<u>Nationally Required:</u>	No
<u>Schedule Date:</u>	
<u>Actual Date:</u>	
<u>Responsible Agency:</u>	EPA or State

CA400 - Date For Remedy Selection (CM Imposed)

Table: Corrective Action Event

<u>Event Code Name:</u>	CA400 - DATE FOR REMEDY SELECTION (CM IMPOSED)
<u>Description:</u>	The event that the State or EPA formally notifies the RCRA facility to initiate the corrective measure that has been proposed in the notification process and is hereby incorporated into the RCRA facility's permit or order.
<u>Initiating Sources:</u>	Permit, permit modification, or enforcement order specifying the corrective measures remedy for a facility or a letter from the Director to the facility owner/operator approving the corrective measures remedy selected by the facility in response to a permit, permit modification, or enforcement order requiring the facility to select a remedy or a decision based on the results of an RFI that further corrective measures are not necessary.
<u>Nationally Required:</u>	Yes
<u>Schedule Date:</u>	Date the Director is expected to approve the RFI document showing no need for corrective measures or the date the facility is expected to be directed to initiate a corrective measures program under a final order or permit.

Actual Date:

Date the permit, permit modification, or enforcement order is issued specifying the corrective measures remedy or the date a letter to the facility is signed by the Director approving the corrective measures remedy selected in response to a permit, permit modification or enforcement order, or the date a letter is signed by the Director to the facility owner/operator indicating that further corrective measures are not necessary.

Responsible Agency:

EPA or State

CA410 - Date To Submit Remedy Design

Table: Corrective Action Event

Event Code Name:

CA410 - DATE TO SUBMIT REMEDY DESIGN

Description:

The event that the RCRA facility submits complete, detailed design drawings of the remedy and its corresponding implementation schedule.

Initiating Sources:Nationally Required:

No

Schedule Date:Actual Date:Responsible Agency:

EPA or State

CA450 - Corrective Measures Design Approved

Table: Corrective Action Event

Event Code Name:

CA450 - CORRECTIVE MEASURES DESIGN APPROVED

Description:

The event by which the State or EPA formally notifies the RCRA facility that the design of the corrective measure is acceptable.

Initiating Sources:

Enforcement order, permit, or permit modification containing the corrective measures design for the facility, or a letter from the Director to the facility owner/operator approving the design prepared in response to a schedule of compliance in a permit, permit modification or enforcement order requiring the facility to prepare a corrective measures design.

Nationally Required:

Yes

Schedule Date:

Date the Director is expected to sign approval of the corrective measures design.

Actual Date: Date the permit, permit modification or enforcement order containing the corrective measures design is issued or the date the Director signs a letter to the facility owner/operator approving the corrective measures design prepared in response to schedule of compliance in a permit, permit modification or enforcement order.

Responsible Agency: EPA or State

CA460 - Cost Estimate For Remedy Received

Table: Corrective Action Event

Event Code Name: CA460 - COST ESTIMATE FOR REMEDY RECEIVED

Description: The event by which EPA or State receives a cost estimate for completing the remedy that the RCRA facility must implement.

Initiating Sources: Written estimate submitted by the facility.

Nationally Required: No

Schedule Date: Date in permit or order condition, or date facility is expected to submit estimate to State or U.S. EPA.

Actual Date: Date written estimate is received by the State or U.S. EPA.

Responsible Agency: EPA or State

CA470 - Financial Assurance For Remedy Demonstration

Table: Corrective Action Event

Event Code Name: CA470 - FINANCIAL ASSURANCE FOR REMEDY DEMONSTRATION

Description: Demonstration by the RCRA facility that it has established the appropriate financial assurance to complete the remedy.

Initiating Sources: Written demonstration of financial assurance submitted by the facility.

Nationally Required: No

Schedule Date: Date in permit or order condition, or date facility is expected to submit demonstration to the State or U.S. EPA.

Actual Date: Date written demonstration is received by the State or U.S. EPA.

Responsible Agency: EPA or State

CA500 - CMI Workplan Approved

Table: Corrective Action Event

<u>Event Code Name:</u>	CA500 - CMI WORKPLAN APPROVED
<u>Description:</u>	The event by which the State or EPA approves the Corrective Measure Implementation Program Plan, Construction Plans and Specification, Design Reports, Cost Estimates, Project Schedule, Operation and Maintenance Plan, Study Reports, Construction Quality Assurance Program Plan/Documentation and the Corrective Measure Implementation Report incorporating comments received on draft submissions.
<u>Initiating Sources:</u>	
<u>Nationally Required:</u>	Yes
<u>Schedule Date:</u>	
<u>Actual Date:</u>	Date signed by Director.
<u>Responsible Agency:</u>	EPA or State

CA510 - Determination Of Technical Impracticability

Table: Corrective Action Event

<u>Event Code Name:</u>	CA510 - DETERMINATION OF TECHNICAL IMPRACTICABILITY
<u>Description:</u>	The event by which the State or EPA formally notifies the RCRA facility that the selected remedy cannot be accomplished because it is technically impracticable.
<u>Initiating Sources:</u>	
<u>Nationally Required:</u>	Yes
<u>Schedule Date:</u>	
<u>Actual Date:</u>	
<u>Responsible Agency:</u>	EPA or State

CA550 - Certification Of Remedy Completion Or Construction Completion

Table: Corrective Action Event

<u>Event Code Name:</u>	CA550 - CERTIFICATION OF REMEDY COMPLETION OR CONSTRUCTION COMPLETION
<u>Description:</u>	The event by which the State or EPA formally notifies the RCRA facility that it accepts its certification that the remedy specifications in the permit or order have been met, and that the specified remedy or remedies has been completed, and/or operation and maintenance requirements only remain in order to maintain this level of performance.
<u>Initiating Sources:</u>	Written acknowledgement, placed in the facility file, stating that the projected activity has been completed.
<u>Nationally Required:</u>	Yes
<u>Schedule Date:</u>	Date the activity is determined to be completed.
<u>Actual Date:</u>	Date the Director signs the final order, permit, or written acknowledgement.
<u>Responsible Agency:</u>	EPA or State
<u>Guidance:</u>	

Data entered previously for this event will generally not need to be changed. Since the previous definition covered CMI completed it has been assumed that this data will, if anything, represent actions that are "more complete" than those that may be entered under this revised definition.

CA600 - Stabilization Measures Implemented

Table: Corrective Action Event

<u>Event Code Name:</u>	CA600 - STABILIZATION MEASURES IMPLEMENTED
<u>Description:</u>	EPA's or the State's notification or written acknowledgement to the RCRA facility that a stabilization activity or activities are required or otherwise being undertaken. The notification mechanism could be an Enforcement order, order modification, permit, or permit modification or similar enforceable state authority requiring the facility to undertake stabilization activity; it may also take the form of a written acknowledgement from EPA or the State that stabilization activity is being undertaken. The notification or acknowledgement must contain written stabilization objectives, goals, performance standards, or desired results. The stabilization activity must control or abate threats to human health and/or the environment from releases, and/or prevent or minimize the further spread of contamination.

Note: from 10/25/91 RCRA stabilization strategy, overall goal of stabilization.

Status Codes:

SR	Primary measure is source removal and/or treatment (e.g., soil or waste excavation, in-situ soil treatment, off-site treatment).
EC	Primary measure is exposure control by barrier and/or institutional control (e.g., capping, fencing, deed restrictions).
GW	Groundwater extraction and treatment (e.g., to achieve groundwater containment, to achieve MCL).
OT	Other Activity

Note: More than one status code may be entered for the same area.

Note: These status codes are different from the current status codes in CA600. The FA and FI codes will now be shown on the implementer level only. Although Regions and authorized States are not required to update the RCRIS database by entering new status code values for facilities which had a CA600 before the beginning of FY 1994, such data improvements are strongly encouraged.

Initiating Sources:

Enforcement order, order modification, permit, permit modification, similar enforceable state authority requiring the facility to undertake stabilization activity, or written acknowledgement from the EPA Region that stabilization activity is being undertaken.

Nationally Required:

Yes

Schedule Date:

Date the Director is expected to sign the final order, order modification, permit, permit modification, or written acknowledgement.

Actual Date:

Date the Director signs the final order, order modification, permit, permit modification, or written acknowledgement.

Responsible Agency:

EPA or State

Guidance:

The status codes for this event provide information on the types of stabilization actions that are being implemented. This information is routinely requested in Congressional inquiries and will be helpful to Headquarters in characterizing national implementation efforts.

CA650 - Stabilization Construction Completed

Table: Corrective Action Event

<u>Event Code Name:</u>	CA650 - STABILIZATION CONSTRUCTION COMPLETED
<u>Description:</u>	The event by which the State or EPA formally notifies the RCRA facility that the interim measures undertaken have been completed to the satisfaction of the Agency; and/or the event by which the State or EPA formally notifies the RCRA facility that stabilization objectives have been met, but require continued operation and maintenance to maintain this level of performance.
<u>Initiating Sources:</u>	Letter from the EPA or the State Director to the facility or an internal written memorandum acknowledging stabilization completion and/or construction completion--conducted through a final order, order modification, permit, permit modification, or written acknowledgement of that the activity has occurred from EPA or the State--transmitted within the government to the facility file.
<u>Nationally Required:</u>	Yes
<u>Schedule Date:</u>	Date the activity is expected to be completed.
<u>Actual Date:</u>	Date the activity is completed.
<u>Responsible Agency:</u>	EPA or State
Guidance:	

The proposed change to CA650 involves a refinement as to what stabilization completed should mean for the CA program. It was recommended that the corrective action program take credit nationally for stabilization efforts that are clearly completed, such as excavations, but also for those efforts that are performing to meet the Agency's stabilization objectives, yet require continued operation and maintenance to maintain this level of performance. As a result of this recommendation, the definition for CA650 has been updated to incorporate these concepts.

The new definition allows "credit" once EPA or the State provides a written determination that the stabilization activity at a facility is completed in a manner that meets the stabilization objectives, goals, performance standards, or desired results. For example, an excavation is completed once the contaminated material has been removed in accordance with the objective of the stabilization measure. An additional example is a groundwater stabilization measure in which a pump and treat system has been constructed and is operating in a manner which achieves the stabilization objective even though continued operation and maintenance is necessary to maintain this level of performance.

Data entered previously for this event will generally not need to be changed. Since the previous definition covered stabilization completed it has been assumed that this data will, if anything, represent actions that are "more complete" than those that may be entered under this revised definition.

CA725 - CMS Workplan Received

Table: Corrective Action Event

Event Code Name:

CA725 - CURRENT HUMAN EXPOSURES UNDER CONTROL

Description:

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

A positive “Current Human Exposures Under Control” EI determination (“YE” status code) indicates that there are no “unacceptable” human exposures to “contamination” (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all “contamination” subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The “Current Human Exposures Under Control” EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program’s overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

EI determinations must be reevaluated when the Agency/State becomes aware of significant changes at the facility.

Status Codes:

- | | |
|-----------|--|
| IN | More information is needed to make a determination. |
| NA | Effective 2/5/1999 per revised program guidance: This code for “Previous determination no longer applicable as of this date” should no longer be used. Previously entered NA status codes should be updated, but may remain in the database until they are replaced by more recent codes. |

- NC** Effective 2/5/1999 per revised program guidance: This code for “No control measures necessary” should no longer be used. Previously entered **NC** status codes should be updated, but may remain in the database until they are replaced by more recent codes.
- NO** Current human exposures are NOT under control.
- YE** Yes, **Current Human Exposures Under Control** has been verified. Based on a review of information contained in the EI determination, current human exposures are expected to be under control at the facility under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

Initiating Sources:

Documentation Of Environmental Indicator Determination form signed by preparer and his/her supervisor. Signed hardcopies of the form should reside in the administrative file for the facility. These forms should also be kept in electronic format that can be posted on an “EI database” web site developed by the Office of Solid Waste. The web site for completed forms is currently under development. However, blank EI guidance forms are available at www.epa.gov/epaoswer/osw.

Nationally Required:

Yes, data for this event will be accessible by Headquarters.

Schedule Date:

Date this event is anticipated.

Actual Date:

Date that the EPA or State documents that the facility has achieved the event, or that the event determination is no longer applicable.

Responsible Agency:

EPA or State

Guidance:

The RCRA corrective action program and achievement of its Government Performance Results Act (GPRA) goals are of highest priority for the national RCRA program. The RCRA program is using two Environmental Indicators (EI) to measure program performance for GPRA purposes: (1) Current Human Exposures Under Control (CA725), and (2) Migration of Contaminated Groundwater Under Control (CA750).

On 2/5/1999 revised interim-final guidance for RCRA Corrective Action Environmental Indicators was issued which replaces the EI guidance promulgated in 1994 and 1995. This will remain the working guidance for at least one year. The interim-final guidance is similar to the earlier guidance but has been modified to facilitate more consistent determinations (across regions and states) and to be more explicit with regard to the minimum level of documentation required to ensure that the determinations will be verifiable. The guidance was developed with the cooperation and input of representatives from all ten EPA regions and at least one state from each region.

The guidance is in the form of questions to be answered in making an EI determination. The question and answer options express the minimum criteria for EI determination and are not to be modified for regional, state or site-specific conditions. Standard forms/worksheets entitled **Documentation of Environmental Indicator Determination** were developed for CA725 and CA750 which will assist

regions and states in making EI determinations and at the same time, formally document the determination process. Signed hardcopies of the forms should reside in the administrative file for the facility. These forms should also be kept in electronic format that can be posted on an “EI database” web site developed by the Office of Solid Waste. The web site for completed forms is currently under development. However, blank EI guidance forms are available for downloading at www.epa.gov/oswer/osw.

Note: A summary of guidance contained on the form for CA725 – Current Human Exposures Under Control follows. This text is largely from the 2/5/99 Interim-Final EI guidance; however, the text has been summarized and slightly modified to fit the format of the RCRIS Data Element Dictionary. EI determinations should not be made based solely on this DED text, and should be based on the full text of the 2/5/99 Interim-Final EI guidance.

The Human Exposures EI is a qualitative screening of exposures and the determinations made should not be used as the sole basis for restricting the scope of more detailed (e.g., site-specific) assessments of risk.

1. First, has **all** available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?
 - If yes, proceed to step 2.
 - If no, reevaluate existing data.
 - If data are not available, skip to step 6 and indicate “IN” (more information needed) status code.
2. Second, are groundwater, indoor air¹, surface soil (e.g., <2 ft), surface water, sediment, subsurface soil (e.g. >2 ft) or outdoor air **media** known or reasonably suspected to be “**contaminated**”² above appropriately protective risk-based “levels” (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?
 - If yes (for any media), proceed to step 3 after identifying key contaminants in each “contaminated” medium, citing appropriate “levels” (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.
 - If no (for all media), skip to step 6, and indicate “YE,” status code after providing or citing appropriate “levels,” and referencing sufficient supporting documentation demonstrating that these “levels” are not exceeded.
 - If unknown (for any media), skip to step 6 and indicate “IN” status code.

Footnotes for Step 2:

¹Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

² “Contamination” and “contaminated” describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based “levels” (for the media, that identify risks within the acceptable risk range).

3. Third, are there **complete pathways** between “contamination” and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

For each “contaminated” media (groundwater, indoor air, surface soil, surface water, sediment, subsurface soil), evaluate potential *Human Receptors* under current conditions (residents, workers, day care, construction, trespassers, recreation, food³). Determine “yes” or “no” for potential “completeness” under each “Contaminated” Media -- Human Receptor combination (Pathway). Use Summary Pathway Evaluation Table provided on EI Determination form.

-- If yes (pathways are complete for any “Contaminated” Media - Human Receptor combination), proceed to step 4 after providing supporting explanation.

-- If no (pathways are not complete for any contaminated media-receptor combination), skip to step 6, and indicate “YE” status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium.

-- If unknown (for any “Contaminated” Media - Human Receptor combination), skip to step 6 and indicate “IN” status code.

Footnote for Step 3:

³Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

4. Fourth, can the **exposures** from any of the complete pathways identified in step 3 be reasonably expected to be “**significant**”⁴ (i.e., potentially “unacceptable” because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable “levels” (used to identify the “contamination”); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable “levels”) could result in greater than acceptable risks)?

-- If yes (exposures could be reasonably expected to be “significant” (i.e., potentially “unacceptable”) for any complete exposure pathway), continue to step 5 after providing a description (of each potentially “unacceptable” exposure pathway) and explaining and/or referencing documentation

justifying why the exposures (from each of the remaining complete pathways) to “contamination” (identified in step 3) are not expected to be “significant.”

-- If no (exposures can not be reasonably expected to be significant (i.e., potentially “unacceptable”) for any complete exposure pathway), skip to step 6 and indicate “YE” status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to “contamination” (identified in step 3) are not expected to be “significant.”

-- If unknown (for any complete pathway), skip to step 6 and indicate “IN” status code.

Footnote for Step 4:

⁴If there is any question on whether the identified exposures are “significant” (i.e., potentially “unacceptable”) consult a human health Risk Assessment specialist with appropriate education, training and experience.

5. Fifth, can the “significant” **exposures** (identified in #4) be shown to be within **acceptable** limits?

-- If yes (all “significant” exposures have been shown to be within acceptable limits), continue to step 6 and indicate “YE” after summarizing and referencing documentation justifying why all “significant” exposures to “contamination” are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

-- If no (there are current exposures that can be reasonably expected to be “unacceptable”), continue to step 6 and indicate “NO” status code after providing a description of each potentially “unacceptable” exposure.

-- If unknown (for any potentially “unacceptable” exposure), continue to step 6 and indicate “IN” status code.

6. Sixth, check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination form (and attach appropriate supporting documentation as well as a map of the facility). Proceed to step 7.

-- YE - Yes, “Current Human Exposures Under Control” has been verified. Based on a review of the information contained in this EI Determination, “Current Human Exposures” are expected to be “Under Control” at the facility under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

-- NO - “Current Human Exposures” are NOT “Under Control.”

-- IN - More information is needed to make a determination.

7. Seventh, ensure that RCRIS is updated. When entering a new status code or changing a previous determination (e.g., IN to YE), a new CA725 event record with the new date should be used instead of overwriting the old status code and the associated date in order to maintain an event history for the facility.

The Environmental Indicator event codes are “legitimate orphans” in RCRIS because they are considered facility-wide events. This means that the event should not be linked to an authority or an area. National reports will only pull unlinked EI data.

CA750 - Groundwater Releases Controlled Determination

Table: Corrective Action Event

Event Code Name:

CA750 - MIGRATION OF CONTAMINATED GROUNDWATER UNDER CONTROL

Description:

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

A positive “Migration of Contaminated Groundwater Under Control” EI determination (“YE” status code) indicates that the migration of “contaminated” groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original “area of contaminated groundwater” (for all groundwater “contamination” subject to RCRA corrective action at or from the identified facility (i.e., site-wide)). While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The “Migration of Contaminated Groundwater Under Control” EI pertains ONLY to the physical migration (i.e., further spread) of contaminated ground water and contaminants within groundwater (e.g., non-aqueous phase liquids or NAPLs). Achieving this EI does not substitute for achieving other stabilization or final remedy requirements and expectations associated with sources of contamination and the need to restore, wherever practicable, contaminated groundwater to be suitable for its designated current and future uses.

EI determinations must be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

Status Codes:

IN	More information is needed to make a determination.
NA	Effective 2/5/1999 per revised program guidance: This code for “Previous determination no longer applicable as of this date” should no longer be used. Previously entered NA status codes should be updated, but may remain in the database until they are replaced by more recent codes.
NO	Unacceptable migration of contaminated groundwater is observed or expected.
NR	Effective 2/5/1999 per revised program guidance: This code for “No release to groundwater” should no longer be used. Previously entered NR status codes should be updated, but may remain in the database until they are replaced by more recent codes.
YE	Yes, Migration of Contaminated Groundwater Under Control has been verified. Based on a review of information contained in the EI determination, it has been determined that migration of contaminated groundwater is under control at the facility. Specifically, this determination indicates that the migration of contaminated groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the existing area of contaminated groundwater. This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

Initiating Sources:

Documentation Of Environmental Indicator Determination form signed by preparer and his/her supervisor. Signed hardcopies of the forms should reside in the administrative file for the facility. These forms should also be kept in electronic format that can be posted on an “EI database” web site developed by the Office of Solid Waste. The web site for completed forms is currently under development. However, blank EI guidance forms are available for downloading at www.epa.gov/oswer/osw.

Nationally Required:

Yes, data for this event will be accessible by Headquarters.

Schedule Date:

Date this event is anticipated.

Actual Date:

Date that the EPA or State documents that the facility has achieved the event, or that the event documentation is no longer applicable.

Responsible Agency:

EPA or State

Guidance:

The RCRA corrective action program and achievement of its Government Performance Results Act (GPRA) goals are of highest priority for the national RCRA program. The RCRA program is using two Environmental Indicators (EI) to measure program performance for GPRA purposes: (1) Current Human Exposures Under Control (CA725), and (2) Migration of Contaminated Groundwater Under Control (CA750).

On 2/5/1999 revised interim-final guidance for RCRA Corrective Action Environmental Indicators was issued which replaces the EI guidance promulgated in 1994 and 1995. This will remain the working guidance for at least one year. The interim-final guidance is similar to the earlier guidance but has been modified to facilitate more consistent determinations (across regions and states) and to be more explicit with regard to the minimum level of documentation required to ensure that the determinations will be verifiable. The guidance was developed with the cooperation and input of representatives from all ten EPA regions and at least one state from each region.

The guidance is in the form of questions to be answered in making an EI determination. The question and answer options express the minimum criteria for EI determination and are not to be modified for regional, state or site-specific conditions. Standard forms/worksheets entitled **Documentation of Environmental Indicator Determination** were developed for CA725 and CA750 which will assist regions and states in making EI determinations and at the same time, formally document the determination process.

Signed hardcopies of the forms should reside in the administrative file for the facility. These forms should also be kept in electronic format that can be posted on an “EI database” web site developed by the Office of Solid Waste. The web site for completed forms is currently under development. However, blank EI guidance forms are available for downloading at www.epa.gov/oswer/osw.

Note: A summary of guidance contained on the form for CA750 – Contaminated Groundwater Under Control follows. This text is largely from the 2/5/99 Interim-Final EI guidance; however, the text has been summarized and slightly modified to fit the format of the RCRIS Data Element Dictionary. EI determinations should not be made based solely on this DED text, and should be based on the full text of the 2/5/99 Interim-Final EI guidance.

1. First, has **all** available relevant/significant information on known and reasonably suspected releases to the groundwater media, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?
 - If no, reevaluate existing data
 - If data are not available, skip to step 8 and indicate “IN” (more information needed) status code.
2. Second, is **groundwater** known or reasonably suspected to be “**contaminated**”¹ above appropriately protective “levels” (i.e., applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?
 - If yes, proceed to step 3 after identifying key contaminants, citing appropriate “levels,” and referencing supporting documentation.
 - If no, skip to step 8 and indicate “YE” status code, after citing appropriate “levels,” and referencing supporting documentation to demonstrate that groundwater is not “contaminated.”

-- If unknown, skip to step 8 and indicate “IN” status code.

Footnote for step 2:

¹ “Contamination” and “contaminated” describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriate “levels” (appropriate for the protection of the groundwater resource and its beneficial uses).

3. Third, has the **migration** of contaminated groundwater **stabilized** (such that contaminated groundwater is expected to remain within “existing area of contaminated groundwater”² as defined by the monitoring locations designated at the time of this determination)?

-- If yes, proceed to step 4 after presenting or referencing the physical evidence (e.g., groundwater sampling/measurement/migration barrier data) and rationale why contaminated groundwater is expected to remain within the (horizontal or vertical) dimensions of the “existing area of groundwater contamination”²).

-- If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the “existing area of groundwater contamination”²), skip to step 8 and indicate “NO” status code, after providing an explanation.

-- If unknown, skip to step 8 and indicate “IN” status code.

Footnote for step 3:

² “existing area of contaminated groundwater” is an area (with horizontal and vertical dimensions) that has been verifiably demonstrated to contain all relevant groundwater contamination for this determination, and is defined by designated (monitoring) locations proximate to the outer perimeter of “contamination” that can and will be sampled/tested in the future to physically verify that all “contaminated” groundwater remains within this area, and that the further migration of “contaminated” groundwater is not occurring. Reasonable allowances in the proximity of the monitoring locations are permissible to incorporate formal remedy decisions (i.e., including public participation) allowing a limited area for natural attenuation.

4. Fourth, does “contaminated” groundwater **discharge** into **surface water** bodies?

-- If yes, proceed to step 5 after identifying potentially affected surface water bodies.

-- If no, skip to step 7 (and indicate a “YE” status code in step 8, if step 7 = yes) after providing an explanation and/or referencing documentation supporting that groundwater “contamination” does not enter surface water bodies.

-- If unknown, skip to step 8 and indicate “IN” status code.

5. Fifth, is the **discharge** of “contaminated” groundwater into surface water likely to be “**insignificant**” (i.e., the maximum concentration 3 of each contaminant discharging into surface water is less than 10 times their appropriate groundwater “level,” and there are no other conditions (e.g., the nature, and

number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?

-- If yes, skip to step 7 (and indicate “YE” status code in step 8 if step 7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration³ of key contaminants discharged above their groundwater “level,” the value of the appropriate “level(s),” and if there is evidence that the concentrations are increasing; and 2) provide a statement of professional judgement/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.

-- If no (the discharge of “contaminated” groundwater into surface water is potentially significant), proceed to step 6 after documenting: 1) the maximum known or reasonably suspected concentration³ of each contaminant discharged above its groundwater “level,” the value of the appropriate “level(s),” and if there is evidence that the concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations³ greater than 100 times their appropriate groundwater “levels,” the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identify if there is evidence that the amount of discharging contaminants is increasing.

-- If unknown, skip to step 8 and indicate “IN” status code.

Footnote for step 5:

³ As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

6. Sixth, can the **discharge** of “contaminated” groundwater into surface water be shown to be “**currently acceptable**” (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented⁴)?

-- If yes - continue after either: 1) identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site’s surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR 2) providing or referencing an interim-assessment,⁵ appropriate to the potential for impact, that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialists, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment “levels,” as well as any other factors, such as effects on ecological receptors (e.g., via bio-assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.

-- If no (the discharge of “contaminated” groundwater can not be shown to be “**currently acceptable**”), skip to step 8 and indicate “NO” status code, after documenting the currently unacceptable impacts to the surface water body, sediments, and/or eco- systems.

-- If unknown, skip to step 8 and indicate “IN” status code.

Footnotes for step 6:

⁴ Note, because areas of inflowing groundwater can be critical habitats (e.g., nurseries or thermal refugia) for many species, appropriate specialist (e.g., ecologist) should be included in management decisions that could eliminate these areas by significantly altering or reversing groundwater flow pathways near surface water bodies.

⁵ The understanding of the impacts of contaminated groundwater discharges into surface water bodies is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration to be reasonably certain that discharges are not causing currently unacceptable impacts to the surface waters, sediments or eco-systems.

7. Seventh, will groundwater **monitoring** / measurement data (and surface water/sediment/ecological data, as necessary) be collected in the future to verify that contaminated groundwater has remained within the horizontal (or vertical, as necessary) dimensions of the “existing area of contaminated groundwater?”

-- If yes, continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify the well/measurement locations which will be tested in the future to verify the expectation (identified in step 3) that groundwater contamination will not be migrating horizontally (or vertically, as necessary) beyond the “existing area of groundwater contamination.”

-- If no, indicate “NO” status code in step 8.

-- If unknown, indicate “IN” status code in step 8.

8. Eighth, check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination form (attach appropriate supporting documentation as well as a map of the facility).

-- YE - Yes, “Migration of Contaminated Groundwater Under Control” has been verified. Based on a review of the information contained in this EI determination, it has been determined that the “Migration of Contaminated Groundwater” is “Under Control” at the facility. Specifically, this determination indicates that the migration of “contaminated” groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the “existing area of contaminated groundwater.” This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

-- NO - Unacceptable migration of contaminated groundwater is observed or expected.

-- IN - More information is needed to make a determination.

9. Ninth, ensure that RCRIS is updated. When entering a new status code or changing a previous determination (e.g., IN to NO), a new CA750 event record with the new date should be used instead of overwriting the old status code and the associated date in order to maintain an event history for the facility.

The Environmental Indicator event codes are “legitimate orphans” in RCRIS because they are considered facility-wide events. This means that the event should not be linked to an authority or an area. National reports will only pull unlinked EI data.

CA999 - Corrective Action Process Terminated

Table: Corrective Action Event

<u>Event Code Name:</u>	CA999 - CORRECTIVE ACTION PROCESS TERMINATED
<u>Description:</u>	<p>This event indicates the completion of the corrective action process; that active remedial measures as specified in the RCRA permit or enforcement order are completed for the entire facility or for areas at the facility.</p> <p>This event should be entered 1) after the Certification of Remedy Completion or Construction Completion (CMI Completed) (CA550), and/or 2) after a stabilization measure(s) has been completed in a manner that meets the stabilization objectives, goals, performance standards, and/or desired results (CA650), and terminating corrective action at this point at the facility or area would satisfy all permit or order requirements for CA.</p> <p>Status Codes:</p> <p>NF No Further Action</p> <p>RM Remedial Activities Completed</p>
<u>Initiating Sources:</u>	Written acknowledgement, placed in the facility file, stating that all projected activity has been completed.
<u>Nationally Required:</u>	Yes
<u>Schedule Date:</u>	Date the event is scheduled to be completed.
<u>Actual Date:</u>	Date the sequence of events was completed.
<u>Responsible Agency:</u>	EPA or State
<u>Guidance:</u>	

This new definition clarifies the difference between CA210 and CA999. Regions have not been using these two events in a nationally consistent way, because national guidance has not been clear. CA999 means all remediation and stabilization has been completed at the facility or area of the facility and all

requirements in facility permits and/orders have been satisfied for the facility or area. CA210 means that the work is being done by another Federal authority. Since CA999 is an important success measure the definition must be clear to ensure that Regions and States will use the event consistently.

Note: RCRIS reports that show data "collapsed" to the facility level will show CA999 for a facility only when (1) the code exists at the facility level (i.e., has not been linked to specific areas), or (2) the code has been linked to **all** areas if it has been linked to **any** area(s).